Complete Summary

GUIDELINE TITLE

Position statement on routine laboratory testing before endoscopic procedures.

BIBLIOGRAPHIC SOURCE(S)

ASGE Standards of Practice Committee, Levy MJ, Anderson MA, Baron TH, Banerjee S, Dominitz JA, Gan SI, Harrison ME, Ikenberry SO, Jagannath S, Lichtenstein D, Shen B, Fanelli RD, Stewart L, Khan K. Position statement on routine laboratory testing before endoscopic procedures. Gastrointest Endosc 2008 Nov;68(5):827-32. [61 references] PubMed

GUIDELINE STATUS

This is the current release of the guideline.

COMPLETE SUMMARY CONTENT

SCOPE

DISEASE/CONDITION(S)

Diseases or conditions requiring gastrointestinal endoscopy

GUIDELINE CATEGORY

Diagnosis
Evaluation
Management
Risk Assessment
Screening

CLINICAL SPECIALTY

Gastroenterology
Surgery

INTENDED USERS

Physicians

GUIDELINE OBJECTIVE(S)

To provide guidance regarding routine laboratory testing before endoscopic procedures

TARGET POPULATION

Patients undergoing gastrointestinal endoscopy

INTERVENTIONS AND PRACTICES CONSIDERED

Routine Pre-Endoscopy Laboratory Testing*

1. Coagulation studies:
    - Prothrombin time (PT)
    - INR (international normalized ratio)
    - Partial thromboplastin time (PTT)
    - Platelet time
    - Bleeding time
2. Chest x-ray
3. Electrocardiogram (ECG)
4. Blood cross-matching
5. Hemoglobin/hematocrit
6. Urinalysis
7. Pregnancy testing
8. Serum chemistry testing

***Note**: No evidence supports routine preprocedure testing; therefore, none of these tests is recommended routinely (see "Major Recommendations" section for procedures to perform on a selective basis).

MAJOR OUTCOMES CONSIDERED

- Incidence of abnormal laboratory test results
- Correlation of abnormal laboratory test results to procedural outcome

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

MEDLINE and PubMed databases were used to search publications related to endoscopy by using the key words "endoscopy" and "laboratory" with each of the following: "preanesthesia," "preoperative," "routine," "screening," and "testing." The search was supplemented by accessing the "related articles" feature of PubMed with articles identified on MEDLINE and PubMed as the references. Pertinent studies published in English were reviewed. Studies or reports that described fewer than 10 patients were excluded from analysis if multiple series with greater than 10 patients addressing the same issue were available.

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

See "Rating Scheme for the Strength of the Recommendations"

METHODS USED TO ANALYZE THE EVIDENCE

Systematic Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

Guidelines for the appropriate practice of endoscopy are based on critical review of the available data and expert consensus.

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Grade of Recommendation	Clarity of Benefit	Methodologic Strength Supporting Evidence	Implications

Grade of Recommendation	Clarity of Benefit	Methodologic Strength Supporting Evidence	Implications
1A	Clear	Randomized trials without important limitations	Strong recommendation; can be applied to most clinical settings
1B	Clear	Randomized trials with important limitations (inconsistent results, nonfatal methodologic flaws)	Strong recommendation; likely to apply to most practice settings
1C+	Clear	Overwhelming evidence from observational studies	Strong recommendation; can apply to most practice settings in most situations
1C	Clear	Observational studies	Intermediate-strength recommendation; may change when stronger evidence is available
2A	Unclear	Randomized trials without important limitations	Intermediate-strength recommendation; best action may differ, depending on circumstances or patients' or societal values
2B	Unclear	Randomized trials with important limitations (inconsistent results, nonfatal	Weak recommendation; alternative approaches may be better under some circumstances

Grade of Recommendation	Clarity of Benefit	Methodologic Strength Supporting Evidence	Implications
		methodologic flaws)	
2C	Unclear	Observational studies	Very weak recommendation; alternative approaches likely to be better under some circumstances
3	Unclear	Expert opinion only	Weak recommendation; likely to change as data become available

Adapted from Guyatt G, Sinclair J, Cook D, et al. Moving from evidence to action: grading recommendations—a qualitative approach. In: Guyatt G, Rennie D, editors. *Users' guides to the medical literature*. Chicago: AMA Press; 2002. p. 599-608.

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

External Peer Review
Internal Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

This document was reviewed and approved by the Governing Board of the American Society for Gastrointestinal Endoscopy. This document was reviewed and endorsed by the Society of American Gastrointestinal Endoscopic Surgeons (SAGES) Guidelines Committee and Board of Governors.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Definitions for the grades of recommendation (1A to 3) are provided at the end of the "Major Recommendations."

1. Routine testing to include coagulation studies, chest x-ray films, electrocardiogram (ECG), blood cross-matching, hemoglobin level, urinalysis, and chemistry tests are not recommended before endoscopy. **(1C)**
2. All women of child-bearing age should be queried about the possibility of being pregnant. Pregnancy testing may be considered in women of child-bearing age unless there is a history of total hysterectomy, bilateral tubal ligation, or absent menses for 1 year (menopause). **(3)**
3. Consider testing based on the perceived level of risk as determined by the medical history and physical examination as follows:
    a. Coagulation studies: Active bleeding, known or clinically suspected bleeding disorder, medication risk (e.g., anticoagulant use, prolonged antibiotics), prolonged biliary obstruction, history of abnormal bleeding (e.g., easy bruisability, epistaxis, bleeding after dental procedures), history of liver disease, malabsorption (e.g., sprue), malnutrition, or other conditions associated with acquired coagulopathies (e.g., leukemia) **(3)**
    b. Chest x-ray film: Advanced age, significant smoking history, recent upper respiratory tract infection, and severe or decompensated cardiopulmonary disease **(3)**
    c. ECG: Advanced age and comorbid illness (e.g., heart disease, arrhythmia, diabetes, hypertension, and electrolyte disturbances), particularly for symptomatic patients undergoing more invasive and prolonged procedures **(3)**
    d. Blood cross-matching: Blood transfusion considered likely **(3)**
    e. Hemoglobin/hematocrit: Existing anemia, risk factors for bleeding, high risk for adverse events with significant bleeding, advanced liver disease or hematologic disorder, endoscopic procedures associated with a high risk of bleeding complications **(3)**
    f. Urinalysis: There are no clear indications for obtaining a urinalysis before endoscopy. **(1C)**
    g. Chemistry testing: Significant endocrine, renal, or hepatic dysfunction and when taking medications that may further impair function **(3)**

Definitions:

Grade of Recommendation	Clarity of Benefit	Methodologic Strength Supporting Evidence	Implications
1A	Clear	Randomized trials without important limitations	Strong recommendation; can be applied to most clinical settings
1B	Clear	Randomized trials with important limitations (inconsistent	Strong recommendation; likely to apply to most practice settings

Grade of Recommendation	Clarity of Benefit	Methodologic Strength Supporting Evidence	Implications
		results, nonfatal methodologic flaws)	
1C+	Clear	Overwhelming evidence from observational studies	Strong recommendation; can apply to most practice settings in most situations
1C	Clear	Observational studies	Intermediate-strength recommendation; may change when stronger evidence is available
2A	Unclear	Randomized trials without important limitations	Intermediate-strength recommendation; best action may differ, depending on circumstances or patients' or societal values
2B	Unclear	Randomized trials with important limitations (inconsistent results, nonfatal methodologic flaws)	Weak recommendation; alternative approaches may be better under some circumstances
2C	Unclear	Observational studies	Very weak recommendation; alternative approaches likely to be better under some circumstances

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CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is identified and graded for each recommendation (see "Major Recommendations").

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Appropriate routine laboratory testing before endoscopic procedures

POTENTIAL HARMS

Not stated

CONTRAINDICATIONS

CONTRAINDICATIONS

Although pregnancy is not a contraindication to endoscopic procedures and the use of moderate sedation, there are situations when it is important to be aware of pregnancy status because it may affect certain procedural aspects such as use of fluoroscopy and choice of sedation agents.

QUALIFYING STATEMENTS

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- Further controlled clinical studies may be needed to clarify aspects of this statement, and revision may be necessary as new data appear. Clinical consideration may justify a course of action at variance with these recommendations.
- This guideline is designed to assist in the selection of patients for whom testing is performed, but it is not intended to determine how a health care professional applies these results to individual patients.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Getting Better
Staying Healthy

IOM DOMAIN

Effectiveness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

ASGE Standards of Practice Committee, Levy MJ, Anderson MA, Baron TH, Banerjee S, Dominitz JA, Gan SI, Harrison ME, Ikenberry SO, Jagannath S, Lichtenstein D, Shen B, Fanelli RD, Stewart L, Khan K. Position statement on routine laboratory testing before endoscopic procedures. Gastrointest Endosc 2008 Nov;68(5):827-32. [61 references] PubMed

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

2008 Nov

GUIDELINE DEVELOPER(S)

American Society for Gastrointestinal Endoscopy - Medical Specialty Society

SOURCE(S) OF FUNDING

American Society for Gastrointestinal Endoscopy

GUIDELINE COMMITTEE

Standards of Practice Committee

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

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FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

ENDORSER(S)

Society of American Gastrointestinal and Endoscopic Surgeons - Medical Specialty Society

GUIDELINE STATUS

This is the current release of the guideline.

GUIDELINE AVAILABILITY

Electronic copies: Available from the American Society for Gastrointestinal Endoscopy Web site.

Print copies: Available from the American Society for Gastrointestinal Endoscopy, 1520 Kensington Road, Suite 202, Oak Brook, IL 60523

AVAILABILITY OF COMPANION DOCUMENTS

None available

PATIENT RESOURCES

None available

NGC STATUS

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